Introduction by Laura Fudala:
Hello, and welcome to Building Healthy Indoor Environments with Healthcare, a new video log in the Building Systems to Sustain Home-Based Asthma Services e-learning course. This log shares a conversation between Kate Hastings, a senior technical advisor to the National Center for Healthy Housing and leader in environmental health and healthcare policy for children, who also facilitates U.S. EPA’s Asthma Community of Practice; and Joel Ervice, the associate director of Regional Asthma Management and Prevention, a program of the Public Health Institute.

In their conversation, Kate and Joel focus on opportunities nationwide for building healthy indoor environments with healthcare partners. They discuss policy change in healthcare that invites health, housing, and energy programs to invest in home environments with healthcare partners to improve health while reducing housing and environmental risks where they cluster—as we see an asthma, where ZIP Code can determine health destiny. Joel and Kate are colleagues and friends, and we’re eager to catch up in a conversation for the many stakeholders in our community, including health departments, asthma programs, healthy housing programs, community health workers, Medicaid and commercial healthcare insurers, weatherization programs, clinical care teams, healthcare administrators, and policymakers at the federal, state, and local levels.

This video log offers a chance to listen in as Kate and Joel reflect on healthcare policy transformation: specifically, how healthcare has grown over the past 20 years to increasingly focus on built environments as community health improvement opportunities. During this time, Kate has consulted to the federal government on...
the social determinants of health and asthma, indoor air quality risks and healthcare standards, and healthy homes and energy efficiency programs.

**Joel Ervice:**
Kate, good to chat with you today.

**Kate Hastings:**
Hey, you too, Joel.

**Joel Ervice:**
Can you share your big-picture perspectives on where we are today with solutions in healthcare? Specifically, tell us about helping the people whom I’ve heard you describe as “kids who need our help to catch a breath,” meaning children with poorly controlled asthma.

**Kate Hastings:**
Hi, Joel. Yes, that’s my— one of my favorite topics to discuss, so I’m happy to talk with you about it. I think my widest-aperture perspective, my really big view, is that healthcare payers—and by that, I mean everyone who pays for healthcare, like Medicaid, Medicare, commercial healthcare insurers, even large employers—these healthcare payers—and the clinical healthcare system, they’re real partners. They’re ready to partner with us around environmental health issues like never before. They're ready to fund and even help deliver and focus where we should consider intervening with environmental health services to reduce health risks and improve health outcomes. And a lot of that focus in healthcare is really beginning and growing up from asthma. In some places, we see healthcare partners paying for, like, environmental home modifications—and it can range from providing supplies, you know, impermeable mattress covers for asthma, for example—but we also see, in some places, healthcare partners coming with pretty significant money for home modifications, even for things like upgrading to a new Green Clean furnace, where we can link that improvement to a health outcome.

I have to also say to balance that first big-picture perspective, that while healthcare payers are real and viable partners to us, they’re not, like, lining up to come pay for health modifications. They’re...

**Joel Ervice:**
Very true.
Kate Hastings:
I think they’re—I think our field, environmental health, built environments, I think the field needs to show up as a business partner to healthcare; and as we do that, I think healthcare is ready in a new way to partner with us because they need our solutions. They’re close cousins; we’re just, we’re not quite all together yet.

Joel Ervice:
I really like that idea of being close cousins; but of course, being in the same family does not guarantee any sort of mutual understanding, right? So, what would help?

Kate Hastings:
Oh, I think that we need some new language, we need some new concepts. You know, all over the country, people are trying models to bring what I’m referring to broadly as “environmental health” together with clinical care and healthcare. We’re learning to sort of recognize one another, and how we can benefit each other, and really how we can benefit our shared clients where we meet; and you know, to my mind, that is in the homes and schools and buildings, but starting first in the homes of mostly low-income people who are disproportionately exposed to environmental health hazards where they live. I think this meeting of healthcare and environmental health to solve health problems before they become costly disease, I think it’s a national imperative. I mean, I don’t think this, I know this.

Joel Ervice:
Right.

Kate Hastings:
Healthcare is the largest and fastest growing part of our U.S. economy, but it’s not providing a return on investment to our society. It’s just costing more and more money. We spend more money on healthcare than any other developed country, yet we don’t get better outcomes. And in fact, the costs of healthcare in the United States are just growing.

Joel Ervice:
Um-hmm.

Kate Hastings:
So, chronic disease disparities are the largest part of our growing healthcare costs; and, you know, clinical healthcare knows that a lot of those chronic disease disparities, they originate and are made worse outside of the clinic.

Joel Ervice:
Um-hmm.

Kate Hastings:
So, we need this, we need this marriage, we need to come together. And I think as healthcare pursues its “Triple Aim,” which is something you hear all over healthcare—it’s...
Kate Hastings:
...better care with better outcomes at better cost—

Joel Ervice:
Um-hmm.

Kate Hastings:
I think healthcare partnerships around home environments are just a national imperative.

Joel Ervice:
Hmm.

Kate Hastings:
So, I think we’ll get there, but we need some new models, some shared language, shared concepts, and some more demonstration programs, but we’re well on our way.

Joel Ervice:
I’d love to talk a little bit more about those new models of care that you just mentioned. And while they may be relatively new, that does not mean they’re not happening regularly, right?

Kate Hastings:
Yeah, I think, I mean, I think that’s right. This change in healthcare policy to pay for more services outside of the clinic, including these cross-sector services—you know, services in homes, in the community—this is happening everywhere across the country. But each state and community is different in developing its own healthcare policy, and payments, and partnerships across sectors, right?

Joel Ervice:
Right.

Kate Hastings:
And those, those policies may or may not include money for home environments. I think [as] environmental health champions, we really need to lead in every state: to help each of our states, like, find and deploy the right environmental health assets for healthcare in our state to achieve real healthcare value. Like, there isn’t just one model of “here’s how environmental health and healthcare should meet,” because there’s no one environmental set of risks, right?

Joel Ervice:
Right, right.

Kate Hastings:
We have lots of environments. We have lots of built environments and lots of indoor environments affecting health outcomes, and, you know, they vary by geography, by climate housing stock, environmental risks.

Joel Ervice:
Right.
Kate Hastings:  
Also, you know, every state and community has different assets, right? Some states have remarkable energy services programs. Some states have great lead and healthy homes programs.

Joel Ervice:  
Um-hmm.

Kate Hastings:  
There's all kinds of assets. So, I think that the kind of tailoring and fitting for purpose of these partnerships between environmental health and healthcare, I mean, it really needs to happen state by state. That said, while there is no one blueprint for “Here’s how you do it, just like this…”

Joel Ervice:  
Right.

Kate Hastings:  
...there’s so much change in healthcare, right now. There’s so much recognition that the roots of our national health crisis lies beyond the clinic door that there are lots of models across the country emerging, showing how funds—basically, starting with funds and policy—how funds and policy can move to bring the clinic and housing services and home visiting services closer together. And every state has to do it its own way; but, like, there are a lot of examples to learn from right now. I mean, Joel, I learned from California and you and all the time—you have a remarkable example out there of leadership, where policy and dollars are starting to come together so clinic...

Joel Ervice:  
Right.

Kate Hastings:  
...and home can come together to solve problems. But there’s a lot happening to drive this focus on home environments, so we need environmental health out in front to kind of help healthcare find the right solution in each state.

Joel Ervice:  
Great. It’s real exciting to hear your optimism. I’m wondering if you can talk a little bit more about the forces that are driving healthcare towards investment in indoor environments.

Kate Hastings:  
Well, so many, and it’s— You know, I’ve been doing this for 25 years, and I keep talking to folks who’ve been doing it as long as I have or longer. There are a lot of factors sort of coming together right now, and that’s where my optimism comes from. But not all of these are, like, happy factors. I mean, some of it is what I was just mentioning: that healthcare totally recognizes these social determinants of health are driving poor outcomes for too many people, and that these costs of these poor outcomes for individuals and society are unsustainable. So, across healthcare, we hear about the social determinants of health and the need to intervene in them.

Joel Ervice:  
Um-hmm.
Kate Hastings:
And so, I think that home modifications, the effect of the environments in which we live, and the fact that the social determinants of health are like a business challenge for healthcare that's a big part of where this is coming from, you know, that there's a business problem. And that's, you know, I think that's part of it.

Joel Ervice:
Right. That's a real interesting point. And I think this simplifies things with maybe a little too much, but it seems that in some cases healthcare has a specific need related to addressing social determinants of health but yet doesn't quite have a clear vision from a business perspective, at least, of how to address that need. What do you think?

Kate Hastings:
Yeah, I, I would say that's accurate. In general, that's right. I think it's really interesting. Healthcare, I mean, by design, it's sort of myopic, right?

Joel Ervice:
Right.

Kate Hastings:
And it's really interesting to me that healthcare, they don't have time to look up and look around and recognize there are a lot of fields that have been working on, quote-unquote, “population health” for a very long time.

Joel Ervice:
Um-hmm.

Kate Hastings:
You know, social sciences, environmental health, building science: There are a lot of solutions for the social determinants of health, but I think healthcare is just starting to realize and learn that environmental health, for example, has these solutions.

Joel Ervice:
Hmm.

Kate Hastings:
A lot of what healthcare sort of thinks of as socioeconomic drivers of health. It can include housing quality, you know, it includes environmental exposures to allergens, to lead, to radon, to mold…

Joel Ervice:
Right.

Kate Hastings:
…and moisture. I think that what healthcare is learning, though, is the evidence base, the technical experience, the proven quality-assured interventions that environmental health has for some of these socioeconomic drivers of poor health.
Joel Ervice:
Hmm.

Kate Hastings:
I think, you know, healthcare, for better or worse, it’s a business; and they have to account for how they spend money on getting health outcomes.

Joel Ervice:
Um-hmm.

Kate Hastings:
And I think as they turned toward the social determinants, they’re still learning fields like environmental health have, we have all kinds of technical experience to bring to this problem that can help them account for how we spend the money. There’s still a lot of work to do to craft those accounting and financing solutions; but I think, you know, healthcare providers, they want to fix these problems...

Joel Ervice:
Right.

Kate Hastings:
...for their patients, and they struggle when they can’t. And so, as we help with this accounting problem, they’re gonna help pay to make their patients healthier. It’s kinda, probably is, oversimplifying, it is oversimplifying it; but like at some level, it’s a business problem to do the right thing. And we’ve just got to build the business models together.

Joel Ervice:
Hmm. Has the COVID pandemic shifted these dynamics at all?

Kate Hastings:
Oh, so much, so much. So, when I say that these healthcare pressures on the on the Triple Aim in healthcare—and trying to get to these new healthcare value arrangements—has driven healthcare toward social determinants of health, the pandemic hyper-accelerated that interest because I think it focused for everyone, not just healthcare, that health in the indoor environment, there’s an enormous link. I think there’s no missing for anyone in any field now that the indoor environments in which we spend our time directly affect our healthcare outcomes and disease disparities. So, I think indoor environment is in focus like never before. You know, we are looking way beyond just asthma triggers and lead today. You know, the science is recognizing that these tiny particles, particulate matter 2.5 and smaller—they’re called “ultrafines”—things that get, you know, these get into our bloodstream, they get through our lungs, we breathe them in; and these exposures are linked to a whole host of very prevalent high-cost chronic disease from, you know, asthma, but also COPD, diabetes...
Joel Ervice:
Right.

Kate Hastings:
...cardiovascular disease, hypertension....

Joel Ervice:
The list goes on, yeah.

Kate Hastings:
Yeah. I’ve never seen the focus this way. And, you know, folks like you at the Public Health Institute also have made the obvious links to climate resilience that investments in indoor environments also offer; and we know that climate change itself is going to be a health risk, making these indoor exposures even more important to address, so yes, COVID has absolutely accelerated this for sure, Joel, yeah. I mean, you must see that the same, right?

Joel Ervice:
Sure, no, absolutely. Yeah, we hear so much from people in community health and housing work, energy and climate, equity advocates, you know; many of these stakeholders that we interact with on a regular basis that, you know, they-they’re struggling to figure this out, and they also, I think, really want to keep pace with some of the healthcare big changes, right, that are that are coming, or at least enough to understand how healthcare is thinking about these types of issues, particularly home environments. At the same time, I think, you know, it sounds like healthcare recognizes that home environmental improvements should be the responsibility to some degree of healthcare in some cases, but I would suspect too that there’s some wariness of mission creep, right, in the business of healthcare into, say, philanthropy. What do you think about that?

Kate Hastings:
I think that sums it up incredibly well. There is great, there is great hesitancy and concern about that mission creep, and you know, healthcare doesn’t want to become the social payer for all of our unpaid bills of, you know, basically, history, right? That’s an impossibility. And that’s why I always talk about this business partnership. I— You know, it’s not that I think healthcare only wants to talk about the business, but I think that coming with solutions that are business focused helps to recognize that healthcare isn’t a philanthropy, that it seeks outcomes, and it seeks outcomes that are cost-effective. And I really think that’s where the opportunity exists for, for our fields to really partner with healthcare in a meaningful way to deliver, you know, the promise of our field to begin with—it’s environmental health at scale. I really think that the business approach helps us on that avoidance of a feeling of mission creep. But I think what you say is very important and to think about that in work with healthcare for sure.

Joel Ervice:
Yeah. So, let’s talk a little bit more about the business angle, and I’m curious to hear you talk a bit about the kinds of business questions that you think are kind of top of mind for healthcare when considering healthy homes and community supports and home modifications and other indoor environmental interventions. Again, in the context of healthcare business opportunities.

Kate Hastings:
Yes, I, so I think healthcare, you know, they have to think through so much: “Who do we pay to deliver what components of care to which of our patients, and how do we know that those
patients are allowed to receive this kind of care through this mechanism that we want to use to potentially deliver it?” It’s, it’s really complicated; but you know, what healthcare has to think through is who to pay, for what, to do what, and can we do that? It’s really, environmental health, you know, we all—It’s funny, we all think, “Well, shouldn’t this be easy for you; well, shouldn’t this be easy for you?” Part of that, like common language and common concepts we have to build in order to partner, is understanding of exactly these kinds of things, and, like, environmental health doesn’t, we have a lot to learn about what healthcare partners can and can’t do.

**Joel Ervice:**
Hmm. Right.

**Kate Hastings:**
The authorities that govern what healthcare can’t do, or can do for different groups of people...

**Joel Ervice:**
Right.

**Kate Hastings:**
...particularly in Medicaid and Medicare and CHIP. You know, and those authorities are both federal and state.

**Joel Ervice:**
Right.

**Kate Hastings:**
So it’s complicated, but those are the kinds of questions, and then there’s this critical question around healthcare return on investment. And that’s where we really start to get into this business and financing partnership. Starting to work through the business puzzle and helping healthcare to answer its own business puzzle about investment in environmental health, that’s kind of the, that’s the frame and that’s the lens that I think helps us think like healthcare...

**Joel Ervice:**
Hmm, yeah.

**Kate Hastings:**
...helps healthcare think about the blend of resources we might have to bring together. I think when nonclinical partners approach healthcare about community health, we really need to help our healthcare partners to think through where can they spend their best healthcare dollar in environmental health to get health outcomes they really care about. That’s what I mean when I say, “healthcare ROI.” So, what, what is it that the healthcare partner really cares about achieving and come[s] talk—ready to talk about what we and environmental health can deliver on that outcome?

**Joel Ervice:**
So, say a little bit more about that because I think in terms of healthcare as a sector, or as, you know, at times, very large institutions, rights, like, this is not necessarily a quick process.
Kate Hastings:
Yeah. Well, that's very true. And you know, then I'm glad you say that because I think about leaders in environmental health who've been trying to work with healthcare for a very long time, myself included. It takes some time. Healthcare changes slowly, and it's like a battleship: You know, the idea, it takes a while to turn a battleship?

Joel Ervice:
Right.

Kate Hastings:
I think healthcare's like a battleship, and it doesn't make small moves; healthcare makes big moves, when it moves, and it needs some real data and assurance before making those moves. Not complete data, but enough to do this accounting, like, I keep mentioning this business planning. And then when healthcare moves—like they're moving right now from this volume-based fee-for-service system to value-based system—it's a process; and so I think that as environmental health partners with healthcare, it's not like we're gonna go to a meeting, we're gonna, we're gonna bang out some costs, you're gonna agree to pay, I'm gonna go do some houses and you're gonna pay me. It's not like that. It's you're entering a business partnership that's gonna develop and grow over time as healthcare grows, but we're gonna to need to keep working with them to size up this “What's the right investment, what's the right partnership, and how do we get together to the best outcomes at the best cost for the best care?” It's like a, I talk about this as a developmental thing. The policies will, will change slowly. The partnerships change slowly; but actually, what's happening is you're building new capacity to, to really business partner.

Joel Ervice:
Hmm. That's a great way to put it.

Kate Hastings:
Basically—and this will make it sound easier than it is but seeing how we're talking about our field as a whole—environmental health needs to help healthcare figure out how to pay, who to pay, and what partnerships to support to achieve healthcare's Triple Aim. Healthcare is trying innovations of all kinds in the social determinants of health realm, and we need to help healthcare invest in these innovations that bring environmental health into core focus. They don't understand our solutions, and they don't have [the] kind of time to understand them in the level of detail environmental health likes to talk; but as a package, we need to help healthcare recognize investing in environmental health can generate the returns they're interested in. They have so much to pay for and to evaluate.

Joel Ervice:
Right.

Kate Hastings:
We need to show up as a solution in that. We have to help, I think, our environmental health value rise to the top as healthcare starts to make more and more of these social determinants of health investments. I think we can because we have all these technical solutions, we have all this evidence; we just have to help them understand it in their language.
Joel Ervice:
Yeah, and I think that's a really important point, one that I'd like to build on. You know, based on our experience in healthcare transformation here in California, I think that it's very true how you described it. And I think the other related dynamic is that the healthcare sector isn't trying to figure out innovations in healthcare exclusively for indoor environmental health but really for a range of issues. So, can you say a bit more about that process and its implications for those of us working on environmental health? You know, essentially, where do we show up in in healthcare's landscape as they pursue these really broad innovations related to value transformation?

Kate Hastings:
Yeah, that's a great point, Joel, and perhaps that's part of why it's hard for us to find each other. Environmental health—and you know, I keep using that as a catch-all for indoor environmental intervention services of all kinds—we don't always recognize, "Oh, social determinants of health and healthcare, that's us!" I think that healthcare is looking at a lot of social determinant of health investments to get population health improvement, and indoor environments is just one sliver. I mean, they also are you know, you might see indoor environments or home modifications or healthy homes, for example, under a list that also includes healthcare investment in meal delivery, in...

Joel Ervice:
Right.

Kate Hastings:
...transportation services...

Joel Ervice:
Right.

Kate Hastings:
...in substance disorder support, in, like, housing and tenancy supports. So, there are a lot of social determinants on the list.

Joel Ervice:
Yeah. It's a long list.

Kate Hastings:
Yeah. Exactly. And these are all social drivers of health outcomes that healthcare is interested in, and it can't pay for everything. It always has to focus on return on investment. I think you know, I mentioned before that healthcare doesn't organize or think in terms of social determinants of health, for water quality, for air quality, for soil quality...

Joel Ervice:
Right.

Kate Hastings:
...or any of the other breakdowns that we might think in environmental health. It doesn't mean that healthcare isn't interested; it just means that's not at all how healthcare purchases services. I actually once heard a Medicaid director kind of balk at an environmental health detailed assessment and the idea of trying to write benefit that conduct every piece of it, because the
Medicaid director was thinking, “Well, we could never write policy at this level of detail,” right? “We have to write broad policy that works to support a broad range of services.” And so environmental health really needs to help, help healthcare recognize how our services can and do fit and not just fit but should be priority within these optional investments and should be priority because of the technical evidence of their impact. You know, that's, that's how I see it, Joel. But we have to...

**Joel Ervice:**
Um-hmm, that's great.

**Kate Hastings:**
We have to be, we have to be a little fluid with this kind of terminology, I think, to be credible with healthcare.

**Joel Ervice:**
Right. I agree. I know that you have some examples to share about progress that's being made in healthcare policy change across the country related to indoor environment improvements. Can you give us some specifics?

**Kate Hastings:**
Yes, very specifically related to asthma and indoor environments and investments in indoor environments as a solution for improving asthma outcomes. I am really lucky that I get to work with this group of innovators who are working at this intersection of healthcare, environmental health, and partnerships around CHW, a community health worker home visiting—CHWs—some of these innovators focus on “energy plus health” care models, and, and a few other topics and folks in these spots. I’ve been very lucky to work with them around championing in-home asthma care, that includes environmental interventions. And this group, you know, some members of this group have been working together sort of loosely since 2012. And they're really, they've been really focused, right, on getting healthcare to reimburse for community health workers, and asthma educators, and healthy home certified practitioners, you know, a whole list of possible folks who can get into homes and help. They're mostly focused on pediatrics but help children who need help to learn to manage their environment. And the same group, they're also really focused on partnering with local housing, local environmental health, local home visiting partners to deliver services and to match with healthcare, financing and clinical partners. So, what we've seen is that across this really diverse group, there has been a ton of progress. And by that, I mean that Medicaid and the Children’s Health Insurance Program in a bunch of states and cities across the country has really changed with these partners to start paying more and more to get into homes, to get after environmental triggers, to get after and fix environmental exposures so that, you know, we're not just continuing to send children back to places [where] they're gonna keep getting sick.

**Joel Ervice:**
Right.

**Kate Hastings:**
And this innovation, and it's experimentation—some of it is permanent policy at this point—some of it is still experimentation, but the pattern across the country is increasingly finding ways to make it work and get money and cooperation between clinic, home, environment, housing; and that's, to me, super exciting.
Joel Ervice:
It is real exciting. I think, for me, one of the things that’s exciting is to see such progress across a range of different states using a lot of different approaches, right? This sort of speaks to that earlier theme of there not being a one-size-fits-all approach.

Kate Hastings:
Yeah, I think that’s, I think that’s absolutely right. And, you know, every state is different for good reason. And it’s not— it’s neat, because we’re seeing different developments to get to the same outcome of putting together better packages of care. I think it’s really exciting because this policy, it’s really happening across the country, and you know, I should say that this is a thin slice; just looking at this, like, asthma care piece. But you know, these payment innovations exist outside of asthma and outside of this set of states. All kinds of healthcare money to flow to in-home services. Like, you see this in a lot of HIV care; you see this in a lot of what is called long-term supportive services, and in Medicare, and I think, you know, this is a very important development for stakeholders who can do work in buildings to help not just children but the elderly. I think that this focus on asthma is great because it’s very environmental health built environment focused, but I think the bigger message is, like, “States are finding ways. Medicaid is finding ways. We are changing our workforce to get after indoor environmental health risks.” Things don’t change on a dime, but like this new language, these new options, these new pathways in policy, all these attempts across the country using different mechanisms: It means that, you know, things are really changing, the policy is in motion, and environmental health has an opportunity to lead, like, toward new solutions, and I’m very, very excited about it. And I’m gonna— I’m excited to have partners like you who I learned from and get to work with and keep building with on this, Joel. I think there’s a lot to be excited about.

Joel Ervice:
I think there’s a lot to be excited about. And we’re certainly leaving this conversation today really enthusiastic about the volume of change that we’re seeing in state healthcare and the different collaborations that are developing between community health and housing and healthcare to address these environmental determinants of health. Do you have any closing words of advice or encouragement for our partners who may want to partner with healthcare?

Kate Hastings:
I have several. I want to say you just mentioned pol— like, we just talked about policy in motion. I should say this slide will, is probably dated as we speak; this policy moves so fast. So always you know, get to know your healthcare quality improvement leaders locally to hear what are the latest opportunities. I think my closing is: be optimistic. Keep calling for meetings. Don’t take no for an answer because there is a partner for you and healthcare; you just may not have met them yet. Or maybe they’re new to their job, and they just don’t know you’re the solution they need yet. But I mean, Joel, you folks in California have shown all of us the benefit of persistently saying, “We have disproportionate impacts here. We have solutions designed for disproportionate impacts in substandard housing.” Yes, stick with it...

Joel Ervice:
Right.
Kate Hastings:
...and call on folks like RAMP. Call on folks like RAMP, the National Center for Healthy Housing...

Joel Ervice:
Absolutely.

Kate Hastings:
...people like me. Call on others for help because folks are learning, and you can learn from what they've already learned, so we accelerate the pace. I think that's probably my advice to our stakeholders is, you know, we got a movement—let's surf it. Let's do it together.

Joel Ervice:
That's great. Well, I think you're absolutely right that this work takes time, right? It's generally not the first ask which leads to a yes. That was certainly the case for us in California, where it took many years to get to where we are today. And I certainly want to echo your comment about people in the field relying on others that, you know, have been down this path for a while, whether that's RAMP, whether that's the National Center for Healthy Housing, whether that's you, whether that's many others that are so willing to, to support this work. It's really, it's a great community, for sure. Well, thanks, Kate, for sharing your time and expertise today. It's been great to talk.

Kate Hastings:
Yes, until I get to see you again, Joel. I’ll look forward to it. Thank you.